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New claims

1. A method for filling a drinks container (10) with a drink (15) which is produced from an initial liquid (24) and has a gas dissolved therein comprising the steps of
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- filling the drinks container (10) with the drink (15) in such a manner that a pre-determined residual gas volume (14) remains above the drink (15) in the drinks container
 - 10 (10), and
 - closing a container opening (12) of the drinks container (10),
- characterized in that a predetermined amount of liquid oxygen is introduced into the drinks
- 15 container (10) and the drinks container (10) is closed directly after introduction of the liquid oxygen, the oxygen only being liquefied in a heat exchanger (66) charged with gaseous oxygen and a cooling medium, for example liquid nitrogen,
- 20 shortly before being fed into the drinks container (10).
2. The method as claimed in claim 1, characterized in that the predetermined amount of
- 25 liquid oxygen is at least about 0.1 ml, preferably between about 0.1 ml and about 3.0 ml, more preferably between about 0.1 ml and about 1.5 ml, still more preferably between about 0.1 ml and about 1.0 ml.
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3. The method as claimed in claim 1 or 2, characterized in that the amount of liquid oxygen to be fed into the drinks container (10) is

determined by appropriate choice of the opening time of a valve of constant passage cross section.

- ³ 4. The method as claimed in one of claims 1 to 3,
5 characterized in that the gas dissolved in the drink (15) comprises oxygen or a carbon dioxide-oxygen mixture.
- ³⁸ 5. The method as claimed in claim 4,
10 characterized in that the carbon dioxide-oxygen mixture comprises between about 200 mg/l and about 500 mg/l, preferably between about 200 mg/l and about 400 mg/l, of oxygen and between about 1.0 g/l and about 4.0 g/l, preferably between
15 about 1.0 g/l and about 2.0 g/l, more preferably between about 1.4 g/l and about 1.8 g/l, still more preferably between about 1.5 g/l and about 1.7 g/l, of carbon dioxide.
- ³⁹ 6. The method as claimed in one of claims 1 to 5,
20 characterized in that the initial liquid (24) has already been enriched with carbon dioxide before it is enriched with oxygen.
- ⁴⁰ 7. The method as claimed in claim 6,
25 characterized in that the initial liquid (24) is enriched with carbon dioxide without degassing it in advance.
- ⁴¹ 8. The method as claimed in one of claims 1 to 5,
30 characterized in that the initial liquid (24) is enriched with a carbon dioxide-oxygen mixture.
- ⁴² 9. The method as claimed in claim 8,
35 characterized in that the carbon dioxide-oxygen mixture comprises between about 2% by volume and about 50% by volume of oxygen and between about 98% by volume and about 50% by volume of carbon

dioxide, preferably about 25% by volume of oxygen and about 75% by volume of carbon dioxide.

10. The method as claimed in one of claims 1 to 9,
5 characterized in that the initial liquid (24) is cooled to a temperature of between about 3°C and about 9°C, preferably about 6°C, before it is enriched with gas.
- 10 11. The method as claimed in one of claims 1 to 10, characterized in that the drinks container (10) is prepressurized with an inert gas, for example carbon dioxide gas, before it is filled with the drink (15).
- 15 12. The method as claimed in claim 11, characterized in that the prepressurizing pressure of the inert gas is between about 5.0 bar and about 8.0 bar, preferably between about 6.5 bar
20 and about 7.0 bar.
13. The method as claimed in one of claims 1 to 12, characterized in that the initial liquid (24) essentially comprises water.
- 25 14. The method as claimed in one of claims 1 to 13, characterized in that at least one constituent is added to the initial liquid (24).
- 30 15. The method as claimed in the claims 6 and 14, characterized in that the at least one constituent is added to the initial liquid (24) between the enrichment with carbon dioxide and the enrichment with oxygen.
- 35 16. A device (20) for filling a drinks container (10) with a drink (15) which is produced from an initial liquid (24) and has gas dissolved therein,

in particular for carrying out the method as claimed in one of claims 1 to 16, comprising

- a filling device (50) which fills the drinks container (10) with the drink (15) in such a manner that a predetermined residual gas volume (14) remains in the drinks container (10) above the drink (15), and
- a closing device (74) which closes the drinks container (10).

10 characterized in that it additionally comprises a liquid oxygen feed device (64) which is disposed immediately upstream of the closing device (74) in the transport direction of the drinks containers (10) and which introduces a predetermined amount
15 of liquid oxygen into the drinks container (10), the liquid oxygen feed device (64) comprising a heat exchanger (66) which is connected to a first feed line (68) for feeding gaseous oxygen and secondly to a second feed line (70) for feeding
20 cooling medium, for example liquid nitrogen and the oxygen only being liquefied shortly before being fed into the drinks container.

17. The device as claimed in claim 16,
25 characterized in that the liquid oxygen feed device (64) comprises a valve having constant passage cross section, the duration of opening of which valve can be controlled in time.

30 18. The device as claimed in claim 16 or 17, characterized in that the gas dissolved in the drink (15) is oxygen or a carbon dioxide-oxygen mixture.

35 19. The device as claimed in claim 18, characterized in that a first enrichment device (32) is provided for enriching the initial liquid (24) with carbon dioxide and a second enrichment

device (44) is provided for enriching the initial liquid (24) with oxygen which is disposed downstream of the first enrichment device (32) in the transport direction of the initial liquid (24).

20. The device as claimed in claim 18, characterized in that an enrichment device (32') is provided for enriching the initial liquid (24) with a carbon dioxide-oxygen mixture.

21. The device as claimed in one of claims 16 to 20, characterized in that a cooling device (28) is provided which cools the initial liquid (24) coming from a reservoir (22) before the enrichment with gas preferably to a temperature of between about 3°C and about 9°C, more preferably to a temperature of about 6°C.

22. The device as claimed in one of claims 16 to 21, characterized in that a prepressurizing device (56) is provided which prepressurizes the drinks container (10), before it is filled with the drink (15), with an inert gas, for example carbon dioxide gas.

23. The device as claimed in claim 22, characterized in that the prepressurizing pressure of the inert gas is between about 5.0 bar and about 8.0 bar, preferably between about 6.5 bar and about 7.0 bar.

24. The device as claimed in one of claims 16 to 23, characterized in that a mixing device (38) is provided which mixes the initial liquid (24) with at least one constituent.

25. The device as claimed in claims 19 and 24,

characterized in that the mixing device (38) is disposed between the first enrichment device (32) and the second enrichment device (44) in the transport direction of the initial liquid (24).

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26. The device as claimed in one of claims 16 to 25, characterized in that the filling device (50) is a filling device operating according to the isobarometric filling principle.